BRUHATH BANGALORE MAHANAGARA PALIKE

Name of the Agency	:	**Mr. G.N. Ramesh,** No.01, 3rd Main, Gandhi Grama, 7th Cross, Maruthi Extn., Opp Malleshwaram Railway Station, Bangalore - 560 021.
Name of the Work	:	Providing pothole filling at Ward No.13 Shettyhalli Sub Division, BBMP, Bangalore.
Estimate Cost	:	Rs.

QUALITY CONTROL REPORTS TO

Asst. Executive Engineer,
Shettyhalli Sub Division,
BBMP, Bangalore.

CIVIL-TECH CONSULTANTS & ENGINEERS

Building & Highway Material Testing Laboratory
NABL ACCREDITED LABORATOTY AS PER ISO / IEC – 17025:2005
No.23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara,
Basaveshwaranagar, Bangalore – 560 079.

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

JAS-ANZ BSCIC ISO 9001 REGISTERED

Job No.: CTCE/BBMP/W.No.13/GNR/WMM/Gradation/2016-17

10.05.2016

GRADATION FOR WMM

MORTH TABLE-400-11

Customer : **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

Agency : **Mr. G.N. Ramesh,**
No.01, 3rd Main, Gandhi Grama, 7th Cross, Maruthi Extn., Opp Malleshwaram Railway Station, Bangalore - 560 021.

Name of Work : Providing pothole filling at Ward No.13 Shettyhalli Sub Division, BBMP, Bangalore.

Reference : EE/DD/WO/83/2015-16 Dated: 24.03.2016

Date of Testing : 10.05.2016

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): **8285**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	155	155	1.9	98.1	95-100
22.4	2650	2805	33.9	66.1	60-80
11.2	1190	3995	48.2	51.8	40-60
4.75	1105	5100	61.6	38.4	25-40
2.36	990	6090	73.5	26.5	15-30
0.600	895	6985	84.3	15.7	8-22
0.075	820	7805	94.2	5.8	0-8

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

****

AE-13

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಶೆಟ್ಟಿಹಳ್ಳಿ ಉಪವಿಭಾಗ, ದಾಸರಹಳ್ಳಿ ವಲಯ
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
ಯಶವಂತಪುರ, ಬೆಂಗಳೂರು-೫೬೦೦೨೨

M/s. Civil-Tech Consultants & Engineers
23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/W.No.13/GNR/CSR-05/040a/QB(BC)/2016-17 18.05.2016

TEST REPORT ON DETERMINATION OF BITUMEN CHARACTERISTICS

***CUSTOMER**	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
***AGENCY**	:	**Mr. G.N. Ramesh,** No.01, 3rd Main, Gandhi Grama, 7th Cross, Maruthi Extn., Opp Malleshwaram Railway Station, Bangalore - 560 021.
***NAME OF THE WORK**	:	Providing pothole filling at Ward No.13 Shettyhalli Sub Division, BBMP, Bangalore.
REFERENCE	:	EE/DD/WO/83/2015-16 Dated: 24.03.2016
***SAMPLE ID**	:	Bitumen
DATE OF SAMPLING	:	16.05.2016
DATE OF TESTING	:	18.05.2016

The results of the tests conducted on the bitumen sample.

Sl. No	Description	Test Method as per IS	Test Result	Requirement as per IS:73:2013
1	Penetration at 25 ^{0}C, 1/10 mm	IS :1203 -1978 (RA-2009)	68	60 to 70
2	Softening point, ^{0}C	IS :1205 -1978 (RA-2009)	46	Min. 45
3	Ductility at 27^{0}C, cm	IS :1208 -1978 (RA-2009)	100 >	Min. 50
4	Flash Point, ^{0}C	IS :1209 -1978 (RA-2009)	302	Min. 220

*Information is furnished by the Customer/Representative.

Civil-Tech Consultants & Engineers Bangalore

Note:

⇒ This test report shall not be reproduced except in full, without written approval of the laboratory.

⇒ The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

****

VISHWANATH .C
Quality Manager

AE-13

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಶೆಟ್ಟಿಹಳ್ಳಿ ಉಪವಿಭಾಗ, ದಾಸರಹಳ್ಳಿ ವಲಯ
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
ಜಿಕೆ.ಎಂ. ರಸ್ತೆ, ರವೀಂದ್ರನಗರ, ಬೆಂಗಳೂರು

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-79.
Tele Fax : 23223227, Website : www.civiltechconsultants.com
E-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.13/GNR/BC/AIV/2016-17

18.05.2016

Aggregate Impact Value

IS: 2386 Part IV

Customer	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
Agency	**Mr. G.N. Ramesh,** No.01, 3rd Main, Gandhi Grama, 7th Cross, Maruthi Extn., Opp Malleshwaram Railway Station, Bangalore - 560 021.
Name of the Work	Providing pothole filling at Ward No.13 Shettyhalli Sub Division, BBMP, Bangalore.
Reference	EE/DD/WO/83/2015-16 Dated: 24.03.2016
Source / Location	Hot Mix Plant, Bangalore
Type of Mix	Bituminous Concrete
Date of Testing	18.05.2016

Sl No.	Details	Trial No.		Average
		1	2	
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	380	382	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	78	79	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	302	303	
4	Aggregate Impact value = percent fines 100* (W_2/W_1) percent	20.53	20.68	**20.60**

Comments:

→ Maximum allowable Aggregate Impact value for Bituminous Concrete is 24%

Note:

⇒ This test report should not be reproduced except in full, without written approval of the laboratory

⇒ The results indicated above are based on the tests carried out on the samples received in the laboratory

⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

****

M/s. Civil-Tech Consultants & Engineers

AE-13

18/5

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಶೆಟ್ಟಿಹಳ್ಳಿ ಉಪವಿಭಾಗ, ದಾಸರಹಳ್ಳಿ ವಲಯ
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
ಎಸ್.ಎಂ. ರಸ್ತೆ, ರವೀಂದ್ರನಗರ, ಬೆಂಗಳೂರು

23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-79.

Tele Fax : 23223227, Website : www.civiltechconsultants.com

E-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

JAS-ANZ BSCIC ISO 9001 REGISTERED

Job No: CTCE/BBMP/W.No.13/GNR/BC/Bitumen/2016-17 20.05.2016

BITUMEN CONTENT AFTER GRADATION DETERMINATION OF BITUMINOUS CONCRETE MIX

As Per IS 2386 and IRC:SP:11-1984

CUSTOMER	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
AGENCY	**Mr. G.N. Ramesh,** No.01, 3rd Main, Gandhi Grama, 7th Cross, Maruthi Extn., Opp Malleshwaram Railway Station, Bangalore - 560 021.
NAME OF THE WORK	Providing pothole filling at Ward No.13 Shettyhalli Sub Division, BBMP, Bangalore.
REFERENCE	EE/DD/WO/83/2015-16 Dated: 24.03.2016
SAMPLE I/D	Pot hole filling to roads in Ward No.13.
DATE OF TESTING	20.05.2016

CIVIL ENGINEERING TESTING LABORATORY www.civiltechconsultants.com

GRADATION AFTER EXTRACTION

Sieve Size in mm	Trail 1				Specified Limits as per MORTH specification table 500-18 (Grading-2)
	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	44.35	9.36	9.36	90.64	79-100
9.5	33.15	6.99	16.35	83.65	70-88
4.75	72.32	15.26	31.61	68.39	53-71
2.36	68.52	14.46	46.06	53.94	42-58
1.18	50.23	10.60	56.66	43.34	34-48
0.6	52.32	11.04	67.70	32.30	26-38
0.3	48.32	10.19	77.89	22.11	18-28
0.15	40.22	8.49	86.38	13.62	12-20
0.075	38.56	8.14	94.51	5.49	4-10

Sieve Size in mm	Trail 2				Specified Limits as per MORTH specification table 500-18 (Grading-2)
	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	32.32	6.83	6.83	93.17	79-100
9.5	48.25	10.20	17.03	82.97	70-88
4.75	66.31	14.02	31.05	68.95	53-71
2.36	70.21	14.84	45.90	54.10	42-58
1.18	75.21	15.90	61.80	38.20	34-48
0.6	42.32	8.95	70.74	29.26	26-38
0.3	30.26	6.40	77.14	22.86	18-28
0.15	24.36	5.15	82.29	17.71	12-20
0.075	42.32	8.95	91.24	8.76	4-10

AC-13

Note:

- This test report should not be reproduced except in full, without written approval of the laboratory
- The results indicated above are based on the tests carried out on the samples received in the laboratory
- Any Query regarding the report must be reported within 30 days from the date of testing

Civil-Tech Consultants & Engineers Bangalore

****

M/s. Civil-Tech Consultants & Engineers
#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthiganapathinagara, Basaveshwaranagar, Bangalore-560079.

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore 79.
Tele Fax : 23223227, Website : www.civiltechconsultants.com
E-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.13/GNR/BC/Agg/2016-17 20.05.2016

Aggregate Gradation Test

IS : 2386 Part I

Customer	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
Agency	**Mr. G.N. Ramesh,** No.01, 3rd Main, Gandhi Grama, 7th Cross, Maruthi Extn., Opp Malleshwaram Railway Station, Bangalore - 560 021.
Name of theWork	Providing pothole filling at Ward No.13 Shettyhalli Sub Division, BBMP, Bangalore.
Reference	EE/DD/WO/83/2015-16 Dated: 24.03.2016
Sample I / D	Hot Mix Plant, Bangalore
Type of Mix	Bituminous Concrete
Date of Testing	20.05.2016

Total Weight of Sample: **5150** gm

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	JOBMIX Gradation as per MORTH	Remarks
19	0	0	0	100	100	Gradation satisfies Bituminous concrete Grade-II specification as per MORTH
13.2	750	14.56	14.56	85.44	79 - 100	
9.5	525	10.19	24.76	75.24	70 - 88	
4.75	615	11.94	36.70	63.30	53 - 71	
2.36	540	10.49	47.18	52.82	42 - 58	
1.18	530	10.29	57.48	42.52	34 - 48	
0.600	525	10.19	67.67	32.33	26 - 38	
0.300	585	11.36	79.03	20.97	18 - 28	
0.150	380	7.38	86.41	13.59	12 - 20	
0.075	360	6.99	93.40	6.60	4 - 10	

Total Weight of Sample: **5250** gm

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	JOBMIX Gradation as per MORTH	Remarks
19	0	0	0	100	100	Gradation satisfies Bituminous concrete Grade-II specification as per MORTH
13.2	640	12.19	12.19	87.81	79 - 100	
9.5	535	10.19	22.38	77.62	70 - 88	
4.75	620	11.81	34.19	65.81	53 - 71	
2.36	560	10.67	44.86	55.14	42 - 58	
1.18	665	12.67	57.52	42.48	34 - 48	
0.600	525	10.00	67.52	32.48	26 - 38	
0.300	595	11.33	78.86	21.14	18 - 28	
0.150	390	7.43	86.29	13.71	12 - 20	
0.075	410	7.81	94.10	5.90	4 - 10	

AE-13

Civil-Tech Consultants & Engineers Bangalore

Note:

⇒ This test report should not be reproduced except in full, without written approval of the laboratory

⇒ The results indicated above are based on the tests carried out on the samples received in the laboratory

⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-79.

Tele Fax : 23223227, Website : www.civiltechconsultants.com

E-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

M/s. Civil Tech Consultants & Engineers
#23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,